



Technical Data

3+

Nitsch & Nitsch Vitamins Solution (1000X)

PL023

Composition :

Ingredients	milligrams/1ml
myo - Inositol	100.00
Thiamine hydrochloride	0.50
Pyridoxine hydrochloride	0.50
Nicotinic acid (Free acid)	5.00
Folic acid	0.50
Biotin	0.05
Glycine (Free base)	2.00
TOTAL gm/1ml	0.11

Directions :

Measure out approximately 600ml of distilled water. While stirring the water, add 1ml of vitamins solution. Add desired heat stable supplements prior to autoclaving. Adjust the medium to the desired pH using 1N HCl/NaOH. Make up the final volume to 1000ml with distilled water. Sterilize the medium by autoclaving at 15 lbs or 121°C for 15 minutes. Cool the autoclaved medium to 45°C before adding the filter sterilized heat labile supplements. Dispense the desired amount of medium in sterile culture vessels.

Principle and Interpretation :

Nitsch & Nitsch vitamins (1000X) is a filter sterilized stock solution. The stock contains vitamins as described by Nitsch & Nitsch. Add 1ml per litre of vitamins stock solution to the prepared medium to achieve the desired concentration.

Quality Control :

Appearance	: Colourless to yellow, clear solution.
pH	: 5.7 ±0.5 of 50ml vitamins stock solution.
Sterility	: No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response :

Cultural condition :

- Incubation period : 5 weeks
- Relative humidity : 60% ± 2%
- Temperature : 22°C ± 2°C
- Photoperiod (D: N) in hours : 16:8

Cell Line	Type of Culture	Results
<i>Musa</i> species	Shoot culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots
<i>Daucus</i> species	Callus culture	No necrotic tissues, Actively growing callus, No toxicity to callus

[The medium is prepared as per direction. The growth promoting activity of this vitamins stock solution is evaluated using two plant species viz. *Musa* species and *Daucus* species through three passages. Plant growth hormones (e.g. 2,4-D, NAA, Kinetin and 6-BAP) are added in suitable combinations and concentrations.]

Storage and shelf life :

Store the vitamins stock solution at 2-8°C away from direct light. If possible, the content of each bottle should be used aseptically after opening and the unused portion should be stored at 2-8°C. Avoid contaminating the liquid. Use before the expiry date.

Reference :

1. Nitsch J.P. & Nitsch C., Science, (1969), 163, 85 - 87

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.